

# Infrared Secure LED Indicator

## ML 1619



communications  
Electrodynamics, Inc.

Developed for use as a function indicator, this solid state lamp with infrared blocking lens is designed to meet the requirements of Secure Lighting per DESC Drwg. 87019 and the U.S. Army Statement of Work. It is panel mountable with solderable leads and includes mounting hardware.

### FEATURES

- Designed to meet CECOM secure lighting statement of work.
- Environmentally Sealed
- Optional EMI Protection
- Screen Colors:  
Red, Yellow & Green
- Panel Mount Seal

### MECHANICAL SPECIFICATIONS

**Case:** Aluminum, black anodized bezel with clear chromate body.

**Mounting:** Front panel by 5/16-32" nut and lockwasher.

**Weight:** 1.5 grams with hardware.

**Seal:** Environmentally sealed with front panel PTFE ring seal.

### ENVIRONMENTAL SPECIFICATIONS

**Vibration:** 2 kHz, MIL STD 202, Method 204, Test Condition D.

**Shock:** 100 G's MIL STD 202, Method 213, Test Condition I.

**Moisture Resistance (Humidity):** MIL STD 202, Method 106.

**Altitude:** 100,000 ft., MIL STD 202, Method 105, Test Condition D.

**Reliability:** Operational  $6 \times 10^6$  hrs. minimum MTBF @ 25°C.

**Salt Spray:** MIL STD 202, Method 101, Test Condition B.

### ELECTRO-OPTICAL CHARACTERISTIC SPECIFICATIONS Absolute Maximum Ratings

#### ML 1619

Colors	Red	Yellow	Green
Forward Voltage (VDC)	1.9	2.1	2.2
Peak Forward Current (mA)	90	60	90
DC Forward Current (mA) *	30	20	30
Reverse Voltage (VDC) @ $I_R = 100 \mu A$	5	5	5
Power Dissipation (mW)	135	85	135
Luminous Intensity (mcd) typical @ $I_f = 20 \text{ mA DC}$	6.0	6.0	6.0
Dominant Wave Length (nm) typical	626	585	569
Viewing Angle ( $2 \theta^{1/2}$ ) typical	32°	32°	32°
Operating Temperature (°C)	-55 to +100	-55 to +100	-20 to +100
Storage Temperature (°C)	-55 to +100	-55 to +100	-55 to +100
Lead Soldering Temperature	260 °C for 5 sec.		

\* For red and green, derate linearly from 50°C @ 0.5 mA/°C. For yellow, derate linearly from 50°C @ 0.2 mA/°C

#### ORDERING INFORMATION

When ordering, show model number first, then LED color, EMI screen, body finish, and the terminal style desired. If this is a special part, factory assigned modification number will be added at the end of the ordering number.

Example: Basic model with red LED with a screen would be model ML 1619 - R-1-2-1.

#### ML 1619 - R - 1 - 2 - 1 - S ( )

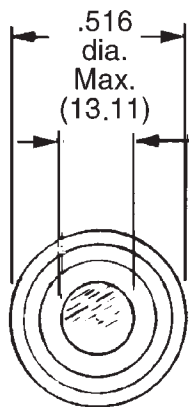
Basic Model Number	Color LED	EMI Screen	Body Finish Color	Terminal Style Color	Factory Modification Number if Special
ML 1619	(R) Red (Y) Yellow (G) Green	(0) None (1) Screen	(2) Clear Chromate	(1) Straight Tin Lead	S.+ ID No.

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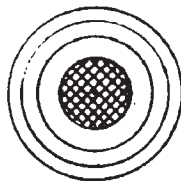
## ML 1619



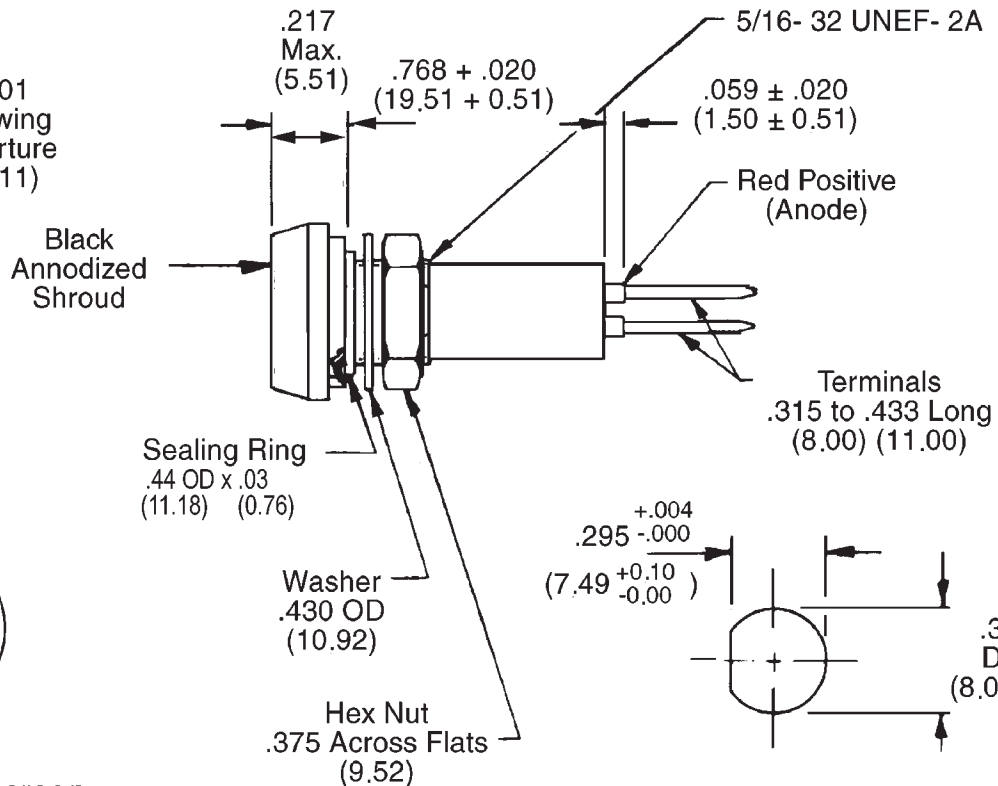
ML 1619



Front View



Front View  
w/ Electrostatic Screen



Mounting Hole Detail

LED INDICATORS

**NOTE:**

Dimensions in ( ) are mm. Tolerances: Decimals: ± .010 (0,25) Fractions: ± 1/64 Mounting Torque: 5-7 in. lbs.  
 L-3 Communications / ElectroDynamics • 1200 Hicks Road • Rolling Meadows, IL 60008 • Tel: 847.660-1750 • Fax: 847.660-1751 • email: edi.info@L-3com.com • www.L-3com.com/edi

# Dimmable Infrared Secure LED Indicator

## MLD 1619

### Features

- Designed to meet CECOM secure lighting statement of work
- Dimmable to 0.05 foot-lamberts
- Optional EMI Protection Screen
- Colors: Red, Yellow, & Green
- Panel Mount Seal



**communications**  
Electrodynamics, Inc.

Developed for use as a function indicator, this solid state indicator provides reduced infrared emissions and variable dimming per CECOM statement of work. It is panel mountable with solderable leads and includes hardware. It can also be produced for non-mil applications.

### Environmental Specifications

**Vibration:** 2 kHz, MIL-STD-202, Method 204, Test Condition D

**Shock:** 50 G's MIL-STD-202, Method 213, Test Condition I.

**Humidity:** MIL-STD-202, Method 106

**Altitude:** 100,000 ft., MIL-STD-202, Method 105, Test Condition D

**Reliability:** Operational 6x10<sup>6</sup> hours min. MTBF@25C°

**Salt Spray:** MIL-STD-202, Method 101, Test Condition B.

### Mechanical Specifications

**Case:** Aluminum, conductive clear chromate

**Cap:** Aluminum, black anodized

**Mounting:** Front Panel by 5/16"-32 nut and lockwasher

**Seal:** Environmentally sealed with front panel PTFE ring seal and internal o-ring seal.

**Terminal Style:** Straight tin lead

## ELECTRO-OPTICAL CHARACTERISTIC SPECIFICATIONS Absolute Maximum Ratings

### MLD 1619

Color	Red	Yellow	Green
Forward Voltage (VDC)	1.9	2.1	2.2
Peak Forward Current (mA)	90	60	90
DC Forward Current (mA) *	30	20	30
Reverse Voltage (VDC) @ I <sub>r</sub> = 100 μA	5	5	5
Power Dissipation (mW)	135	85	135
Luminous Intensity (mcd) typical @ I <sub>f</sub> = 20 mA DC	2.5	4.0	5.0
Dominant Wave Length (nm) typical	626	585	569
Viewing Angle (2 Ø <sup>1/2</sup> ) typical	32°	32°	32°
Operating Temperature (°C)	-55 to +100	-55 to +100	-20 to +100
Storage Temperature (°C)	-55 to +100	-55 to +100	-55 to +100
Lead Soldering Temperature	260 °C for 5 seconds		

\* For red and green, derate linearly from 50°C @ 0.5 mA/°C. For yellow derate linearly from 50°C @ 0.2 mA/°C

### ORDERING INFORMATION

When ordering, show model number first, followed by EMI screen, LED color, lens type and the terminal style desired. If this is a special part, the factory assigned modification number will be added at the end of the ordering number.

Example: Basic model with an EMI screen, red LED, a non-diffused lens and loop terminals is MLD 1619 E - R - ND - LT

**MLD 1619 E - R - ND - LT - S ( )**

Basic Model Number	EMI Screen	Color LED.	Lens Type	Terminal Style	Factory Modification Number if Special
MLD 1619	( ) None E Screen	R Red Y Yellow G Green	ND Non-Diffused D Diffused	ST Straight Lead LT Solder Loop	S.+ ID No.

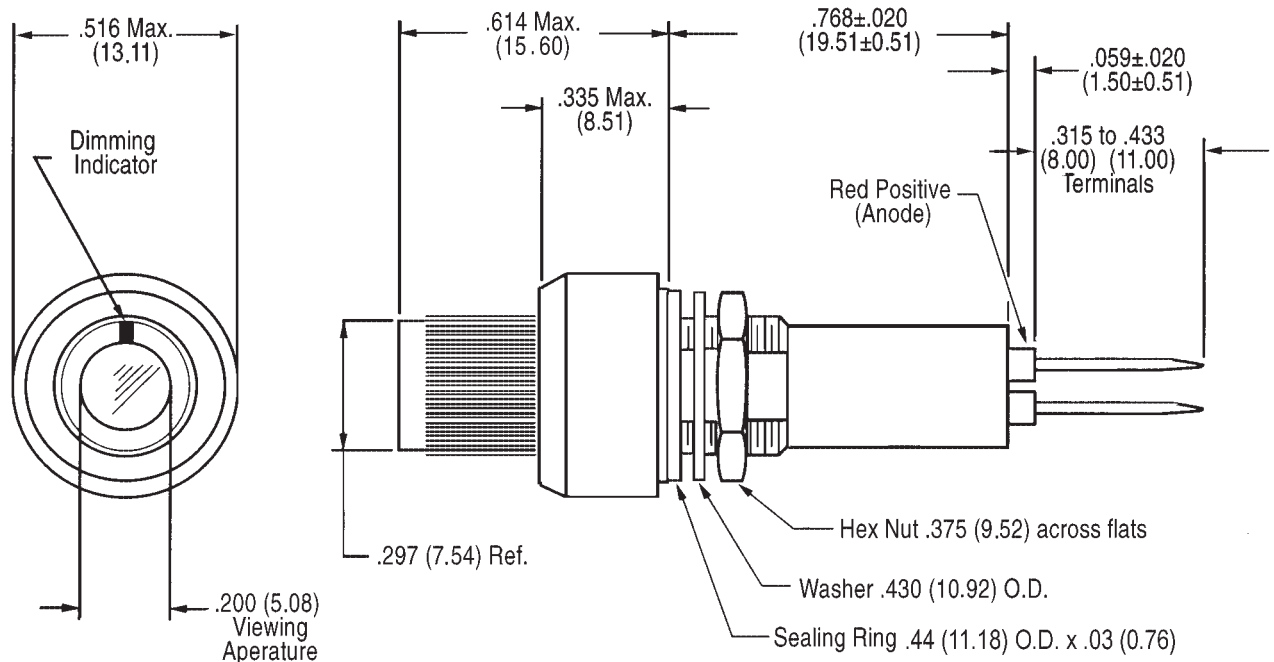
# Dimmable Infrared Secure LED Indicator

## MLD1619



MLD1619

### Model MLD 1619



LED INDICATORS

### Mounting Hole Detail

**NOTE:**

Dimensions in ( ) are mm. Tolerances: Decimals:  $\pm .010 \text{ (0.25)}$  Fractions:  $\pm 1/64$  Mounting Torque: 5-7 in. lbs.

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